recurrence of blepharospasm and consequent ectropion should be carefully followed up. Additional eyelid surgery may have been helpful in this patient.

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References

1 **Nerad JA**, Kersten RC, Neuhaus RW, *et al*. Classification and management of eyelid disorders: ectropion. In: Nerad JA, Kersten RC, Neuhaus RW, *et al*, eds. *Basic and clinical science course: orbit, eyelids, and lacrimal system*. San Francisco: American Academy of Ophthalmology, 1997:142–8.
2 **Bashour M**, Harvey J. Causes of involutional ectropion and entropion—age-related tarsal changes are the key. *Ophthal Plast Reconstr Surg* 2000;**16**:131–41.
3 **Leibovitch I**, Davis G, Selva D, *et al*. Non-cicatricial upper eyelid ectropion. *Br J Ophthalmol* 2005;**89**:1226–7.
4 **Jost WH**, Kohl A. Botulinum toxin: evidence-based medicine criteria in blepharospasm and hemifacial spasm. *J Neurol* 2001;**248**:21–4.
5 **Dutton JJ**, Buckley EG. Long-term results and complications of botulinum A toxin in the treatment of blepharospasm. *Ophthalmology* 1988;**95**:1529–34.

Sudden loss of vision caused by a vasculitic ophthalmic artery occlusion in a patient with ankylosing spondylitis and Crohn's disease

We report for the first time a vasculitic ophthalmic artery in an HLA-B27 positive patient with ankylosing spondylitis and a new presentation of Crohn's disease.

Case report

A 37-year-old woman presented with sudden painless loss of vision in the right eye to perception of light, the left having poor vision from chronic uveitis and glaucoma. Examination showed iritis, an intra-ocular pressure of 2 mm Hg, a cherry red spot at the fovea with cloudy swelling, attenuated blood vessels and segmented blood flow consistent with global ocular ischaemia. The left eye showed a pale disc from long standing glaucoma. General examination showed that sinus tachycardia and blood pressure was normal.

The patient had a history of bilateral uveitis and ankylosing spondylitis for 14 years and was HLA-B27 positive. She had undergone cataract surgery bilaterally, followed by the development of glaucoma, requiring bilateral trabeculectomies and subsequently Molteno implants for its control.

Some weeks before admission, she had reported general constitutional symptoms, abdominal pain and loose stools which were controlled with sulphasalazine.

Acute investigations showed an erythrocyte sedimentation rate of 67 mm/h, C reactive protein 142 IU, neutrophilia and macrocytic anaemia (Hb 11.4 g/dl). Initial management comprised methylprednisolone (1 g/day) followed by 80 mg of prednisolone daily with a rapid taper and subcutaneous heparin. Magnetic resonance imaging and magnetic resonance angiography showed no evidence of cerebral vasculitis and normal flow in the ophthalmic arteries. Echocardiogram showed no source of embolus. Carotid ultrasound was normal. She was then referred for further management.

At this stage, she was on 40 mg of prednisolone and her vision had improved to count fingers in the right eye. Goldman visual fields showed marked constriction to all targets with a central scotoma to the V4e in the right eye. The intra-ocular pressure was 11 mm Hg bilaterally. Right fundal examination showed attenuated blood vessels and a pale disc. Inflammatory markers had risen again with a C reactive protein 108 IU. Antineutrophil cytoplasmic antibody, lupus anticoagulant and thrombophilia screen were normal. Colonoscopy showed moderate to severe pancolitis including the terminal ileum. Histopathology of the large-bowel mucosa showed chronic active colitis, cryptitis, crypt abscesses and a diagnosis of active Crohn's disease was made. TNFα blockade treatment using infliximab was instituted with improvement of bowel and joint symptoms but her vision remained unchanged.

Comment

Iritis is the most common extra intestinal feature of inflammatory bowel disease (2% in women; 1.1% in men).[1] Common ocular features in Crohn's disease include anterior uveitis, episcleritis and more rarely scleritis, keratitis, orbital pseudotumour and retinal vasculitis which may cause retinal artery occlusion.[2–5] Branch retinal artery occlusion as a complication of retinal vasculitis causing subsequent retinal neovasularisation has also been reported[6] and fluorescin angiography has confirmed evidence of subclinical retinal vasculitis in patients with inflammatory bowel disease.[7]

A case of Crohn's disease with joint involvement has been reported after presentation with ophthalmic artery occlusion [8] but this is the first case report of ophthalmic artery occlusion with ocular ischaemia associated with ankylosing spondylitis (HLA-B27 positive) and later diagnosis of Crohn's disease.

Summary

The likely aetiology is an obliterative vasculitis caused by granulomas in the blood vessel wall.[9] Crohn's disease has also been reported in association with large vessel arteritis and axillary artery occlusion.[10]

Anti-TNFα agents have shown effectiveness in the treatment of spondyloarthropathies and Crohn's disease; amelioration of the extra-intestinal manifestations of the disease is variable. This case highlights the need to consider vasculitic causes of ocular ischaemia in patients with seronegative arthropathies who are HLA-B27 positive and should alert ophthalmologists that further investigation is necessary.

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References

1 **Bernstein CN**, Kraut A, Blanchard JF, *et al*. The prevalence of extraintestinal diseases in inflammatory bowel disease: a population-based study. *Am J Gastroenterol* 2001;**96**:1116–22.
2 **Salmon JF**, Ursell PG, Firth P. Neovascular glaucoma as a complication of retinal vasculitis in Crohn's disease. *Am J Ophthalmol* 2000;**130**:528–30.
3 **Ruby AJ**, Jampol LM. Crohn's disease and retinal vascular disease. *Am J Ophthalmol* 1990;**110**:349–53.
4 **Garcia-Diaz M**, Mira M, Nevado L, *et al*. Retinal vasculitis associated with Crohn's disease. *Postgrad Med J* 1995;**71**:170–2.
5 **Duker JS**, Brown GC, Brooks L. Retinal vasculitis in Crohn's disease. *Am J Ophthalmol* 1987;**103**:664–8.
6 **Saatci OA**, Kocak N, Durak I, *et al*. Unilateral retinal vasculitis, branch retinal artery occlusion and subsequent retinal neovascularization in Crohn's disease. *Int Ophthalmol* 2001;**24**:89–92.
7 **Matsuo T**, Yamaoka A. Retinal vasculitis revealed by fluorescein angiography in patients with inflammatory bowel disease. *Jpn J Ophthalmol* 1998;**42**:398–400.
8 **Bonvin ER**, Dosso AA, Safran AB. Ophthalmic artery occlusion in Crohn's disease. *Klin Monatsbl Augenheilkd* 1994;**204**:450–2.
9 **Pounder RE**. The pathogenesis of Crohn's disease. *J Gastroenterol* 1994;**29**(Suppl 7):11–5.
10 **Sheehan-Dare RA**, Goodfield MJ, Wilson PD, *et al*. Axillary artery occlusion as a presenting feature of Crohn's disease. *Postgrad Med J* 1989;**65**:758–60.

Orbital brachytherapy for extrascleral extension of choroidal melanoma

Extrascleral extension of choroidal melanoma increases the risk of metastasis.[1] Anterior extrascleral extension can be treated by local resection with enucleation or scleral reinforcement after local radiation therapy. Advanced cases are dealt with by enucleation with resection of all visible orbital melanoma followed by radiation. External beam radiation therapy (EBRT) is used for presumed residual microscopic orbital melanoma.[2] Massive extrascleral extension may require orbital exenteration (also followed by irradiation).[3] Treated similarly, extrascleral extension can also occur after plaque radiation, local resection and trans-scleral thermotherapy (TTT).[4]

Radiation therapy is used to reduce the rates of orbital and systemic recurrence.[5 6] We report on the first use of orbital brachytherapy as an alternative to EBRT for extrascleral extension of choroidal melanoma.

A 63-year-old man presented to The New York Eye Cancer Center, with an American Joint Committee on Cancer (AJCC) T4N0M0 choroidal melanoma.[7 8] Ultrasound disclosed a 6.5-mm-high tumour, 25×23 mm base, with extrascleral extension.

A metastatic survey was negative.[9] The eye and all visible extrascleral tumour was removed and a 20-mm polymethylmethacrylate implant was inserted. Histopathology showed an epithelioid malignant melanoma,

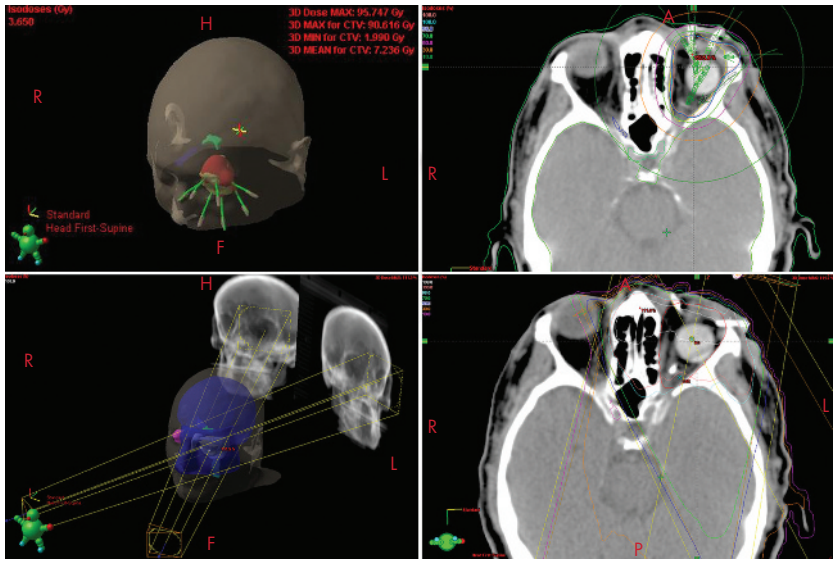

Figure 1 Upper left and upper right, three-dimensional dosimetry used for the HDR iridium-192 orbital implant (Eclipse, Varian, Palo Alto, California, USA). Note the conformality of dose to the orbit. Lower left and lower right, three-dimensional simulation for 6 MV external beam radiation therapy shows an increased dose to the eyelids (anterior) and brain (posterior to the orbit).

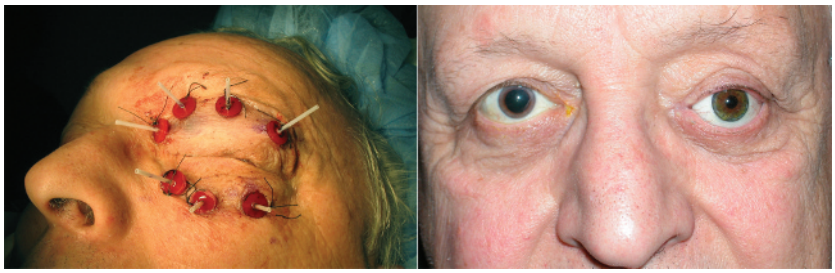

Figure 2 Left: Photograph of the external aspect of the brachytherapy catheters implanted in the orbit. Right: Photograph of the patient 1 year after treatment. Note the preservation of eyelashes and eyebrow, and the excellent cosmetic result.

arising in the choroid extending into the orbit.

Known EBRT-related risks (blepharitis, excoriation, eyelash and brow loss, dry eye) and benefits (prevention of local recurrence and metastasis) were discussed. Implant brachytherapy and EBRT plans were compared (fig 1). Owing to the shorter time of treatment and relative sparing of adjacent normal structures (including his eyelids and brain), our patient requested brachytherapy.

Implantation technique

Bimanual catheter implantation was carried out under general anaesthesia. Each catheter was measured and marked at 4.5 cm to prevent extension beyond the orbit. Skin marks were also placed just beneath and above the orbital rim. A number 11 blade was used to create skin incisions to facilitate catheter insertion. A bimanual technique was used. Although the catheter was inserted through the skin incision, fingers were used to palpate its tip as it traversed the orbital soft tissues.

Four catheters were placed through the upper and[3] the lower lids (fig 2, left). The catheters were glued (cyanoacrylate) to plastic buttons, then sewn to the skin for stability. Computed tomography defined the catheter position for three-dimensional treatment planning.

Radiation treatment

Catheters were remotely after-loaded with iridium-192 to a total dose of 32.85 Gy. Radiation was delivered in 3.65 Gy fractions (twice per day) over 4.5 days.

The dose volume histogram showed that 90% of the clinical target volume (the left orbit) received 100% of the prescribed dose. The orbital apex was relatively spared in an effort to avoid the optic chiasm. The radiobiological equivalent was 45 Gy in 6-MV photon EBRT fractionation.

Clinical findings

At the one-year follow-up, clinical and radiographic evaluations of the patient showed no clinical signs of local recurrence. However, a restaging showed metastatic melanoma in the liver.[10] Until his death, our patient maintained good ocular motility, alignment of his prosthesis and a mild dry eye. His periorbital skin remained intact, with minimal eyelash loss. There have been no persistent signs of eyelid inflammation, excoriation or dry socket (fig 2, right).

Summary

Orbital brachytherapy should be considered as an alternative to EBRT in the treatment of extrascleral extension of choroidal melanoma. Although post-enucleation orbital brachytherapy required surgical placement of catheters (with minimal risks of infection and bleeding), the duration of treatment was shorter (4–5 days *v* 4–5 weeks). Comparative dosimetry found that brachytherapy delivered more radiation to the tumour bed, with relative sparing of the eyelids and intracranial structures. Clearly, orbital brachytherapy-related dose reductions to the eyelids resulted in improved cosmesis.

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References

1 **Hyken PG**, McCartney AC, Plowman PN, *et al*. Post-enucleation orbital radiotherapy for the treatment of malignant melanoma of the choroid with extrascleral extension. *Br J Ophthalmol* 1990;**74**:36–9.
2 **Finger PT**. Radiation therapy for choroidal melanoma. *Surv Ophthalmol* 1997;**42**:215–32.
3 **Moshfeghi DM**, Moshfeghi AA, Finger PT. Enucleation. *Surv Ophthalmol* 2000;**44**:277–301.
4 **Murthy R**, Honavar SG, Naik M, *et al*. Clinicopathologic findings in choroidal melanomas after failed transpupillary thermotherapy. *Am J Ophthalmol* 2004;**137**:594–5.
5 **The Collaborative Ocular Melanoma Study (COMS) randomized trial of preenucleation radiation of large choroidal melanoma**. III: local complications and observations following enucleation COMS report no 11. *Am J Ophthalmol* 1998;**126**:362–72.
6 **Collins JE**, Paine CH, Ellis F. Treatment of connective tissue sarcomas by local excision followed by radioactive implant. *Clin Radiol* 1976;**27**:39–41.
7 **Haik B**, Ainbinder DJ, Finger PT, *et al*. Part X: opthalmic sites [carcinoma of the eyelid, carcinoma of the conjunctiva, malignant melanoma of the conjunctiva, malignant melanoma of the uvea, retinoblastoma, carcinoma of the lacrimal gland, sarcoma of the orbit]. In: Greene FL, Page DL, Fleming ID,*et al*, eds. *AJCC cancer staging manual*. 6th edn New York: Springer-Verlag, 2002:347–84.
8 **Finger PT**. Do you speak ocular tumor? *Ophthalmology* 2003;**110**:13–14.
9 **Finger PT**, Kurli M, Reddy S, *et al*. Whole body PET/CT for initial staging of choroidal melanoma. *Br J Ophthalmol* 2005;**89**:1270–4.
10 **Kurli M**, Reddy S, Tena LB, *et al*. Whole body positron emission tomography/computed tomography staging of metastatic choroidal melanoma. *Am J Ophthalmol* 2005;**104**:193–9.